

Compound Interest THE RULE OF 72

- IT'S A -
**MONEY
THING**®



“ Money makes money.
And the money that money
makes, makes money. ”

- Ben Franklin

Compound interest means earning interest on your interest—you can use the

Rule of 72

to approximate how long it will take for an investment to double at a given interest rate. It's useful for:



COMPARING INVESTMENTS



SAVINGS GOALS



RETIREMENT GOALS

Divide the rule number (**72**) by the annual interest rate (**R**) to find out the approximate time (**T**) required for doubling. The Rule of 72 only applies to compound interest, not to simple interest calculations.

$$72 \div \overset{\text{INTEREST RATE}}{\mathbf{R}} = \overset{\text{YEARS TO DOUBLE}}{\mathbf{T}}$$

— FOR EXAMPLE —

$$72 \div \underset{\substack{\uparrow \\ \text{3\% ANNUAL INTEREST RATE}}}{\mathbf{3}} = \underset{\substack{\uparrow \\ \text{24 YEARS TO DOUBLE}}}{\mathbf{24}}$$

Although scientific calculators and spreadsheet programs have functions to find the accurate doubling time, the Rule of 72 is useful for mental calculations or when only a basic calculator is available.

This table illustrates just how close the Rule of 72 is to the actual doubling time.

| Interest rate | Actual years | Rule of 72 |
|---------------|--------------|------------|
| 1% | 69.66 | 72.00 |
| 2% | 35.00 | 36.00 |
| 3% | 23.45 | 24.00 |
| 4% | 17.67 | 18.00 |
| 5% | 14.21 | 14.40 |
| 6% | 11.90 | 12.00 |
| 7% | 10.24 | 10.29 |
| 8% | 9.01 | 9.00 |
| 9% | 8.04 | 8.00 |
| 10% | 7.27 | 7.20 |

Modest increases in rates have a dramatic effect on the doubling time.

| Years | 1.5% | 3% | 6% | 12% |
|-------|----------|----------|-----------|-------------|
| 0 | \$10,000 | \$10,000 | \$10,000 | \$10,000 |
| 6 | | | | \$20,000 |
| 12 | | | \$20,000 | \$40,000 |
| 18 | | | | \$80,000 |
| 24 | | \$20,000 | \$40,000 | \$160,000 |
| 30 | | | | \$320,000 |
| 36 | | | \$80,000 | \$640,000 |
| 42 | | | | \$1,280,000 |
| 48 | \$20,000 | \$40,000 | \$160,000 | \$2,560,000 |



THE TAKEAWAY

Use the Rule of 72 to estimate your potential savings. Time is money when it comes to compound interest—the longer you wait to get started, the less interest you'll earn.

ABSOLUTELY NO GUARANTEES

All investments carry the risk of losing some or all of your money, even when made through a financial advisor or financial institution

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